

Claims

We claim:

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1. A device comprising a cell or tissue disrupter having a disruption element for use in conjunction with a sample container wherein the disruption element has an outer dimension slightly smaller than an inside dimension of the container.
 - 10 2. The device of claim 1 wherein the outer dimension of the disruption element is greater than .3 times said inner dimension of the container.
 3. The device of claim 1 wherein the outer dimension of the disruption element is greater than .75 times said inner dimension of the container.
 - 15 4. The device of claim 1 wherein the disruption element comprises a dense material with a density above 7.0
 5. The device of claim 4 wherein the disruption element comprises a steel or a
20 material having equivalent or greater density than 8.0.
 6. The device of claim 1 wherein the disruption element is a stainless steel ball having a diameter of about 6 mm and the container is a tube having an inner diameter of about 8 mm.
 - 25 7. A method for disrupting cells or tissue comprising placing a sample comprising cells or tissue in a container, adding a nucleic acid stabilizing solution to said container, placing a disruption element into said container, and employing a disruption device for 45 seconds or less.

8. The method of claim 7 wherein the sample on which the disruption device is employed is a lymph node sample, from which supernatant is decanted and from which nucleic acid is extracted.

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9. A method of extracting nucleic acids from a tissue or cell sample comprising placing a sample comprising cells or tissue in a container, adding a nucleic acid stabilizing solution to said container, placing a disruption element into said container, employing a disruption device for 45 seconds or less, removing the sample on which the disruption device is employed, and extracting nucleic acids therefrom.

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10. The method of claim 9 wherein the disruption element has an outer dimension slightly smaller than an inside dimension of the container.

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11. The method of claim 10 wherein the outer dimension of the disruption element is greater than .3 times said inner dimension of the container.

12. The method of claim 10 wherein the outer dimension of the disruption element is greater than .75 times said inner dimension of the container.

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13. The method of claim 10 wherein the disruption element comprises a dense material.

14. The method of claim 10 wherein the disruption element comprises a steel or a material having equivalent or greater density to that of steel.

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15. The method of claim 10 wherein the disruption element is a stainless steel ball having a diameter of about 6 mm and the container is a tube having an inner diameter of about 8 mm.

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16. The method of claim 10 conducted intra-operatively.

17. The method of claim 16 wherein the sample is lymph node tissue.